

Dmitry N Chigrin

List of Publications by Year in descending order

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101
papers

3,074
citations

201385

27
h-index

155451

55
g-index

105
all docs

105
docs citations

105
times ranked

3646
citing authors

#	ARTICLE	IF	CITATIONS
1	Graphene-based nano-patch antenna for terahertz radiation. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2012, 10, 353-358.	1.0	331
2	Using Low-Loss Phase-Change Materials for Mid-Infrared Antenna Resonance Tuning. <i>Nano Letters</i> , 2013, 13, 3470-3475.	4.5	257
3	Observation of total omnidirectional reflection from a one-dimensional dielectric lattice. <i>Applied Physics A: Materials Science and Processing</i> , 1999, 68, 25-28.	1.1	241
4	Self-guiding in two-dimensional photonic crystals. <i>Optics Express</i> , 2003, 11, 1203.	1.7	214
5	Reversible Optical Switching of Infrared Antenna Resonances with Ultrathin Phase-Change Layers Using Femtosecond Laser Pulses. <i>ACS Photonics</i> , 2014, 1, 833-839.	3.2	181
6	Electro-optical switching by liquid-crystal controlled metasurfaces. <i>Optics Express</i> , 2013, 21, 8879.	1.7	163
7	All-dielectric one-dimensional periodic structures for total omnidirectional reflection and partial spontaneous emission control. <i>Journal of Lightwave Technology</i> , 1999, 17, 2018-2024.	2.7	127
8	Phonon-Polaritonic Bowtie Nanoantennas: Controlling Infrared Thermal Radiation at the Nanoscale. <i>ACS Photonics</i> , 2017, 4, 1753-1760.	3.2	114
9	Plasmonic Smart Dust for Probing Local Chemical Reactions. <i>Nano Letters</i> , 2013, 13, 1816-1821.	4.5	104
10	Optical Properties of Single Infrared Resonant Circular Microcavities for Surface Phonon Polaritons. <i>Nano Letters</i> , 2013, 13, 5051-5055.	4.5	101
11	Graphene hyperlens for terahertz radiation. <i>Physical Review B</i> , 2012, 86, .	1.1	84
12	Resonant add-drop filter based on a photonic quasicrystal. <i>Optics Express</i> , 2005, 13, 826.	1.7	76
13	Spectral shifts in optical nanoantenna-enhanced hydrogen sensors. <i>Optical Materials Express</i> , 2012, 2, 111.	1.6	61
14	Strong Photoacoustic Signal Enhancement by Coating Gold Nanoparticles with Melanin for Biomedical Imaging. <i>Advanced Functional Materials</i> , 2018, 28, 1705607.	7.8	60
15	Nanopillars photonic crystal waveguides. <i>Optics Express</i> , 2004, 12, 617.	1.7	56
16	Switchable Lasing in Multimode Microcavities. <i>Physical Review Letters</i> , 2007, 99, 073902.	2.9	49
17	Optimizing the Geometry of Photoacoustically Active Gold Nanoparticles for Biomedical Imaging. <i>ACS Photonics</i> , 2020, 7, 646-652.	3.2	49
18	Advanced Optical Programming of Individual Meta-Atoms Beyond the Effective Medium Approach. <i>Advanced Materials</i> , 2019, 31, e1901033.	11.1	47

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19	Characterization of graphene-based nano-antennas in the terahertz band. , 2012, , .		46
20	Three Dimensional Photonic Crystals in the Visible Regime. Progress in Electromagnetics Research, 2003, 41, 307-335.	1.6	44
21	Highly Confined and Switchable Mid-Infrared Surface Phonon Polariton Resonances of Planar Circular Cavities with a Phase Change Material. Nano Letters, 2019, 19, 2549-2554.	4.5	43
22	Plasmonic nanoparticle monomers and dimers: from nanoantennas to chiral metamaterials. Applied Physics B: Lasers and Optics, 2011, 105, 81-97.	1.1	38
23	Slow-light dispersion in coupled periodic waveguides. Journal of the Optical Society of America B: Optical Physics, 2008, 25, C65.	0.9	34
24	Emission Quenching of Magnetic Dipole Transitions near a Metal Nanoparticle. ACS Photonics, 2016, 3, 27-34.	3.2	32
25	Enhanced infrared spectroscopy using small-gap antennas prepared with two-step evaporation nanosphere lithography. Optics Express, 2014, 22, 14425.	1.7	31
26	Plasmonic rod dimers as elementary planar chiral meta-atoms. Optics Letters, 2011, 36, 2278.	1.7	30
27	Dispersionless tunneling of slow light in antisymmetric photonic crystal couplers. Optics Express, 2008, 16, 1104.	1.7	29
28	Optically active Babinet planar metamaterial film for terahertz polarization manipulation. Laser and Photonics Reviews, 2013, 7, 810-817.	4.4	27
29	Periodic thin-film interference filters as one-dimensional photonic crystals. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2001, 91, 484-489.	0.2	26
30	Aspect-ratio driven evolution of high-order resonant modes and near-field distributions in localized surface phonon polariton nanostructures. Scientific Reports, 2016, 6, 32959.	1.6	25
31	Theory of Cherenkov radiation in periodic dielectric media: Emission spectrum. Physical Review A, 2009, 79, .	1.0	24
32	Enhanced emission extraction and selective excitation of NV centers with all-dielectric nanoantennas. Laser and Photonics Reviews, 2015, 9, 385-391.	4.4	24
33	Light emission in a directional photonic bandgap. Physica Status Solidi A, 2003, 197, 662-672.	1.7	21
34	Numerical characterization of nanopillar photonic crystal waveguides and directional couplers. Optical and Quantum Electronics, 2005, 37, 331-341.	1.5	21
35	Radiation pattern of a classical dipole in a photonic crystal: Photon focusing. Physical Review E, 2004, 70, 056611.	0.8	20
36	The Potential of Combining Thermal Scanning Probes and Phase-Change Materials for Tunable Metasurfaces. Advanced Optical Materials, 2021, 9, 2001243.	3.6	19

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37	Scattering of terahertz radiation on a graphene-based nano-antenna. AIP Conference Proceedings, 2011, , .	0.3	18
38	Comparison of the resonant frequency in graphene and metallic nano-antennas. AIP Conference Proceedings, 2012, , .	0.3	18
39	Numerical modelling of lasing in microstructures. Physica Status Solidi (B): Basic Research, 2007, 244, 3515-3527.	0.7	15
40	Bistability and mode interaction in microlasers. Physical Review A, 2009, 79, .	1.0	15
41	Selective lasing in multimode periodic and non-periodic nanopillar waveguides. Physica Status Solidi (B): Basic Research, 2007, 244, 1211-1218.	0.7	12
42	Multiphysics simulations of adaptive metasurfaces at the meta-atom length scale. Nanophotonics, 2020, 9, 675-681.	2.9	12
43	Out-of-phase coupled periodic waveguides: a "couplonic" approach. Optical and Quantum Electronics, 2007, 39, 837-847.	1.5	11
44	Polariton bandstructure of disordered metallic photonic crystal slabs. Physica Status Solidi (B): Basic Research, 2007, 244, 1262-1269.	0.7	10
45	Dynamic flow enables long-term maintenance of 3D vascularized human skin models. Applied Materials Today, 2021, 25, 101213.	2.3	10
46	Photonic quasicrystals for application in WDM systems. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 997-1001.	0.8	9
47	Low-loss resonant modes in deterministically aperiodic nanopillar waveguides. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 2265.	0.9	9
48	Coupled nanopillar waveguides optical properties and applications. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 3647-3661.	0.8	9
49	Optical memory based on ultrafast wavelength switching in a bistable microlaser. Optics Letters, 2009, 34, 3310.	1.7	9
50	Light extinction in bulk and thin film opal photonic crystals. Synthetic Metals, 2003, 139, 601-604.	2.1	8
51	Controlled Gold Nanorod Reorientation and Hexagonal Order in Micromolded Gold Nanorod@pNIPAM Microgel Chain Arrays. Small, 2017, 13, 1603054.	5.2	7
52	Graphene microheater for phase change chalcogenides based integrated photonic components [Invited]. Optical Materials Express, 2022, 12, 1991.	1.6	7
53	Spatial distribution of the emission intensity in a photonic crystal: Self-interference of Bloch eigenwaves. Physical Review A, 2009, 79, .	1.0	6
54	Spatial distribution of Cherenkov radiation in periodic dielectric media. Journal of Optics, 2009, 11, 114008.	1.5	5

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55	Efficient construction of maximally localized photonic Wannier functions: locality criterion and initial conditions. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1951.	0.9	5
56	Dichroism, chirality, and polarization eigenstates in Babinet nanoslot-dimer membrane metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2013, 11, 353-361.	1.0	5
57	<title>Free-coordinate formalism for nonlinear photoanisotropy optics description and light propagation effects in periodic anisotropic structures</title>. , 1998, 3580, 2.		4
58	<title>Self-guiding in two-dimensional photonic crystals</title>. , 2002, , .		4
59	Photonic crystal couplers for slow light. , 2008, , .		4
60	Light propagation in opal heterojunctions. , 2004, , .		2
61	Local photonic modes in periodic or random, dielectric, and lasing media. Applied Physics B: Lasers and Optics, 2011, 105, 163-180.	1.1	2
62	Directionality of light emission in three-dimensional opal-based photonic crystals (Invited Paper). , 2005, 5825, 160.		1
63	Nanopillar coupled periodic waveguides: from basic properties to applications. , 2006, , .		1
64	Strong mode coupling, bistable lasing, and switching mode dynamics in twin coupled microcavities. Proceedings of SPIE, 2007, , .	0.8	1
65	Numerical time-domain simulation of planar chiral metamaterials. , 2009, , .		1
66	An explicit finite-difference method to calculate liquid crystal re-orientation dynamics. , 2012, , .		1
67	Plasmonic dimer metamaterials and metasurfaces for polarization control of terahertz and optical waves. , 2013, , .		1
68	Programmable Metasurfaces: Advanced Optical Programming of Individual Meta-Atoms Beyond the Effective Medium Approach (Adv. Mater. 29/2019). Advanced Materials, 2019, 31, 1970210.	11.1	1
69	The Potential of Combining Thermal Scanning Probes and Phase-Change Materials for Tunable Metasurfaces (Advanced Optical Materials 2/2021). Advanced Optical Materials, 2021, 9, 2170008.	3.6	1
70	Generalization of the Effective Medium Method for Continuously Inhomogeneous Media. Electromagnetics, 1997, 17, 287-294.	0.3	0
71	Emission studies of dyes in a strong 3-dimensional photonic bandgap environment. , 0, , .		0
72	Octagonal photonic quasicrystal based add-drop filter. , 0, , .		0

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73	Add-drop resonance filter based on photonic quasicrystal. , 0, , .		0
74	Emission modification in heterostructured opal photonic crystals. , 0, , .		0
75	Preface: phys. stat. sol. (b) 244/10. Physica Status Solidi (B): Basic Research, 2007, 244, 3417-3418.	0.7	0
76	Experimental observation of slow light tunneling in coupled periodic waveguides. , 2008, , .		0
77	Bistability and ultrafast mode switching in microlasers. , 2008, , .		0
78	Observation of Slow Light Tunneling in Coupled Periodic Waveguides. , 2008, , .		0
79	TaCoNa-Photonics 2008. Journal of Optics, 2009, 11, 110201.	1.5	0
80	Control of cavity modes in coupled periodic waveguides. , 2009, , .		0
81	Ultrafast wavelength switching in bistable microlasers for optical memory applications. , 2009, , .		0
82	Wavelength self-switching in bistable microlasers. , 2010, , .		0
83	Light Scattering on Nanowire Antennas: A Semi-Analytical Approach. , 2010, , .		0
84	TaCoNa-Photonics 2009. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 209.	1.0	0
85	TaCoNa-Photonics 2010. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 295.	1.0	0
86	Preface: The Fourth International Workshop on Theoretical and Computational Nanophotonics. , 2011, , .		0
87	Light Emission and Scattering in Plasmonic Nano-Structures. , 2011, , .		0
88	Monochromatic Wannier Functions in the Theory of 2D Photonic Crystals and Photonic Crystal Fibers. , 2011, , .		0
89	Graphene wire medium: Homogenization and application. , 2012, , .		0
90	Preface: The Fifth International Workshop on Theoretical and Computational Nano-Photonics 2012. , 2012, , .		0

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91	Dichroism versus chirality in plasmonic dimer metamaterials: A multipole approach. , 2012, , .		0
92	Evolution of a quantum emitter near plasmonic nano-structures. , 2012, , .		0
93	Anisotropic anti-rod dimer metamaterial film for terahertz polarization manipulation. , 2012, , .		0
94	Slot-dimer babinet metamaterials as polarization shapers for terahertz waves. , 2013, , .		0
95	Metal membrane with dimer slots as a universal polarizer. Proceedings of SPIE, 2014, , .	0.8	0
96	All-dielectric nanoantenna for single NV center radiation collection enhancement. , 2014, , .		0
97	High-Order Multipole Resonances in Cuboidal Surface Phonon Polariton Nanoresonators. NATO Science for Peace and Security Series B: Physics and Biophysics, 2017, , 501-502.	0.2	0
98	Strong Coupling Effects Between IR-Inactive Zone Folded LO Phonon and Localized Surface Phonon Polariton Modes in SiC Nanopillars. NATO Science for Peace and Security Series B: Physics and Biophysics, 2018, , 417-418.	0.2	0
99	Nanopatterning of Phase-Change Material Thin Films For Tunable Photonics. , 2021, , .		0
100	PHOTONIC FREQUENCY-SENSITIVE COMPONENTS BASED ON COUPLED NANOPILLAR PERIODIC WAVEGUIDES. , 2005, , .		0
101	Plasmonic Dimers as Planar Chiral Meta-Atoms. , 2010, , .		0